

Main motif in the analytical psychology is understanding of human inner self to the finest detail yet it can only reveal picture from a mental perspective. Therefore, unique collaboration was established: on one side, Carl Gustav Jung deep insights into a realm of the mind and, on the other side, Wolfgang Pauli discoveries on the field of the quantum physics. This joined work is called Pauli-Jung conjecture proposing that the mental (psychological) and the material (physical) are distinct aspects of one underlying reality which is itself none of those two.

Envisioned by Karl Popper, one of the greatest philosophers of science, the term "conjecture" refers to the hypothesis, an idea that is bold, unjustifiably anticipated and speculative yet it can be right. It was first proposed in his work "Logik der Forschung" with further elaboration in the "Conjectures and Refutations". Regarding how much Pauli and Jung were ahead of their time it is no wonder why their work was named conjecture since it ventured beyond an empirical domain into the field of metaphysics.

From dawn of the civilization, scientists and philosophers have discussed the origin of the consciousness, formation of the thought and the metaphysical realm surrounding the reality but it was not until René Descartes connected the mental and the physical into a "substance dualism", immediately followed by Baruch Spinoza's philosophy about "substance, its attributes and modes" while their contemporary, Gottfried Wilhelm Leibniz, spoke of the monads. Together they gave birth to the rationalistic worldview applying a reason and a logic as the only means to explain an existence in its very essence.

After Einstein, Podolsky and Rosen letter, in which they discuss incompleteness of the quantum mechanics, Pauli wrote to Heisenberg: "for a systematic foundation of the quantum mechanics one needs to begin with composition and decomposition of the quantum systems".

The base concept in Pauli-Jung conjecture, actually a dialog between Pauli and Jung, is "unus mundus" or thinking there is a primordial, uniform substance from which everything else derives manifested as archetypes, inherited patterns, and governed by the synchronicity, meaningful coincidences, knowing that both observer and observed phenomenon arise from the same source. Moreover, any quantum measurement is not simply a value detecting method but also incorporates change of the system observed. Consequently, result outcomes are probabilistic, similar to the Bayesian statistics, rather than ultimate, as Newton's are.

Quantum theory predicts correlations which cannot be causally explained, such as quantum entanglement described by Albert Einstein as "spooky action at the distance", and proposes hidden variables to explain the phenomenon while at the same time C. G. Jung talks about, seemingly, uncausal synchronistic events.

Jungian archetypes are universal ideas present in the collective unconsciousness of all human beings. Quantum theory suggests field(s) interaction with the matter on the subatomic level through equations like Schrodinger or Dirac. What are "collective unconsciousness" and "quantum field" if not the same thing? Or at least directly connected, co-related in a

sense that quantum brings forth the collective but also collective influences the quantum, in a sort of win-win situation, where two are in the state of a mutual dependence being able to synchronize one with another.

Synchronicity, "an Acausal Connecting Principle" as described by C. G. Jung, says that natural laws are statistical truths while on the infinitesimal scale prediction(s) become uncertain meaning the causality is no longer valid. I argue that maybe it is just not longer visible due to our limited insight.

Scientific view of the world, its experimental method of an inquiry, rules out unique or rare events. What we call "chance" or "coincidence" therefore could be a causality which has not yet been revealed.

Perceptual psychologist Karl Zener and parapsychologist Joseph Banks Rhine conducted a series of experiments using, so called, Zener cards. It is a set of 25 numbered cards each containing a geometrical sign. They are showed to the subjects, separated by a physical obstacle from an experimenter, who then try to guess what symbol is currently presented. Many attempts had low or middle probability value but some of the test subjects showed high above average results. The distance between an experimenter and those subjects was significantly increased, for example they used Durham and Zagreb as test locations, receiving equally positive results.

On synchronicity, Jung concludes that inexplicable is not due to the cause being unknown but due to the fact it can not be known using regular categories. Spacetime and causality, classical concepts in physics, hence should be augmented with a synchronicity in order to get the full picture of the reality. Especially when space and time lose their meaning or become relative.

My thoughts on the Pauli-Jung conjecture:

What if the singularity didn't give rise to a duality but it is actually an opposite - the two, Yin and Yang, gave raise to the One?

Anyway, this specific physics and psychology partnership, or quantum psychology as I call it, evidently strucked the traits of a modern science which impact is yet to be thoroughly felt.